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# PARK DEPARTMENT

## ANNUAL REPORTS

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# SEVENTH ANNUAL REPORT OF THE BOARD OF PARK COMMISSIONERS OF THE CITY OF CAMBRIDGE

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*To the Honorable, the City Council of the City of Cambridge:—*

GENTLEMEN:—The Board of Park Commissioners has the honor to submit herewith its seventh annual report, for the year ending November 30, 1899, and also the sixth annual report of the General Superintendent of Parks, as required by Section 4 of the Ordinance establishing a Park Department.

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On September 8, 1899, the Board submitted the following recommendation:—

CAMBRIDGE, September 8, 1899.

*To the Honorable, the City Council of the City of Cambridge:—*

GENTLEMEN:—The Park Commissioners respectfully recommend that the land around the Washington Elm, recently enclosed by curbing, be placed under their control. Said land is described as follows:—

A parcel of land supposed to belong to a person or persons unknown, being a part of a street or way known as Garden Street; bounded and described as follows:—

Beginning at a point marked "A" on a plan hereinafter mentioned, said point being on the face of the curbing surrounding the Washington Elm, and 13.9 feet northerly from the north line of Mason Street produced and 38 feet easterly from the west line of Garden Street; thence running in a general southerly direction along the face of the curbing 73.39 feet to the tangent point of a curve of 3 feet radius which point is 44.5 feet easterly from the west line of Garden Street and 5.7 feet south of the south line of Mason Street produced; thence southerly and westerly along the face of the curbing by said curved line of 3 feet radius 8.14 feet to a compounding point with a curve of 84 feet radius; thence in a general northerly direction along the face of the curbing by said curved line of 84 feet radius 79.14 feet to a compounding point with a curve of 3 feet radius; thence running in a general easterly direction along the face of the curbing by said curved line of 3 feet radius 8.04 feet to the point of beginning. Containing 886.0 square feet.

The foregoing described land is shown upon a plan entitled "Plan of land taken for Park Purposes at the Washington Elm," dated August 7, 1899, drawn and

## CITY OF CAMBRIDGE.

signed by L. M. Hastings, City Engineer, and on file in the office of the City Engineer, a copy of which plan is to be recorded in the Middlesex South Registry of Deeds, reference to which is hereby made for a more particular description of the land taken.

Respectfully,

GEO. HOWLAND COX,  
WILLIAM M. RICHARDSON, } *Park Commissioners.*  
EDMUND REARDON,

In accordance with the above recommendation, the following order was adopted November 27, 1899, and approved by the Mayor, November 28, 1899:

IN BOARD OF ALDERMEN,  
November 27, 1899.

*Ordered:*—That the land around the Washington Elm, recently enclosed by a curbing, be placed under the control of the Board of Park Commissioners, said land being a part of the public street or way known as Garden Street, and shown upon a plan entitled "Plan of land taken for Park Purposes at the Washington Elm," dated August 7, 1899, drawn and signed by L. M. Hastings, City Engineer, a copy of which plan is to be recorded in the Middlesex South Registry of Deeds, reference to which is made for a more particular description of said land.

On October 24, 1899, the Board submitted the following recommendation:

CAMBRIDGE, October 24, 1899.

*To the Honorable, the City Council of the City of Cambridge:—*

GENTLEMEN:—The Board of Park Commissioners respectfully recommend to the City Council, that the City take, under the authority granted by Chapter 341 of the Acts of 1892, entitled "An Act to authorize the City of Cambridge to lay out and maintain public parks," and Chapter 337 of the Acts of 1893, amendatory thereto, the parcel of land supposed to belong to the Cambridge Hospital, described as follows:—

Beginning at the tangent point of a curved line of 70 feet radius in the proposed taking line, said point being in the division line between land of Cambridge Hospital and land of the City of Cambridge and 115.14 feet southerly, measured on said division line from a stone bound at the intersection of said division line with the southerly line of Mt. Auburn Street; thence southerly along said division line 141.68 feet to its intersection with the northerly harbor line of Charles River, said harbor line at this point being a curved line of 831.51 feet radius; thence westerly and southwesterly along said harbor line 491.34 feet to its intersection with the division line between land of the Cambridge Hospital and land owned by the Commonwealth for Metropolitan Park purposes; thence northwesterly along said division line 91.65 feet to the intersection with the proposed taking line, said line at this point being a curved line of 2,777.5 feet radius; thence northeasterly along said taking line 282.42 feet to a compounding point with a curved line of 777.5 feet radius; thence northeasterly along said curved line of 777.5 feet radius 269.29 feet to a point of reverse curvature with a curved line of 70 feet radius; thence northeasterly and northerly along said curved line of 70 feet radius 67.60 feet to a tangent point in the division line between land of the Cambridge Hospital and land of the City of Cambridge at the point of beginning. Containing 43,847 square feet; divided between flats, 16,360 square feet, and upland, 27,487 square feet.

For more particular description reference may be had to plan No. 5,208, on file in the office of the City Engineer, a copy of the portion showing land taken as above described is to be placed on file at the Middlesex South District Registry of Deeds.

Respectfully,

GEO. HOWLAND COX,  
*President of the Board.*

The following order for taking the land recommended in above report, was adopted by both branches of the City Council, November 27, 1899, and approved by the Mayor, December 2, 1899:

IN BOARD OF ALDERMEN,  
November 27, 1899.

*Whereas*, by Chapter 341 of the Acts of the Legislature of the Commonwealth of Massachusetts for the year 1892, entitled "An Act to authorize the City of Cambridge to lay out and maintain public parks," and accepted by the City Council of the City of Cambridge, by a resolve approved June 15, 1892, and by Chapter 337 of the Acts of the Legislature for the year 1893, amendatory of said Chapter 341, it is provided that said City "by its City Council at any time after the passage of this Act may take and hold by purchase or otherwise, any and all real estate and lands within said city as it may deem advisable, upon the recommendation of the Board of Park Commissioners hereinafter mentioned, and may lay out and maintain and improve the same as a public park or parks"—and

*Whereas*, it is deemed advisable upon the recommendation of said Board of Park Commissioners that the city should, under the provisions of the aforesaid acts, take and hold for the purpose of improving the same as a public park or parks, the lot or parcel of land hereinafter bounded and described, and

*Whereas*, "An appropriation sufficient to cover the estimated expense thereof" has been made by the City Council, as required by Section 3 of the aforesaid Chapter 337, of the Acts of the Legislature of 1893,—

*Now, therefore, be it known*, that by virtue and in pursuance of the authority conferred by said Acts of the Legislature, and by every other power and authority it hereto enabling, the City of Cambridge, by its City Council, does hereby take for the purpose aforesaid the following described lot or parcel of land situated within the limits of said City, to wit:—

A parcel of land supposed to belong to the Cambridge Hospital, bounded as follows:—

Beginning at the tangent point of a curved line of seventy (70) feet radius in the proposed taking line, said point being in the division line between land of Cambridge Hospital and land of the City of Cambridge and one hundred and fifteen and fourteen hundredths (115.14) feet southerly, measured on said division line from a stone bound at the intersection of said division line with the southerly line of Mount Auburn Street; thence southerly along said division line one hundred and forty and sixty-eight hundredths (140.68) feet to its intersection with the northerly harbor line of Charles River, said harbor line at this point being a curved line of eight hundred and thirty-one and fifty-one hundredths (831.51) feet radius; thence westerly and southwesterly along said harbor line four hundred and ninety-one and thirty-four hundredths (491.34) feet to its intersection with the division line between land of the Cambridge Hospital and land owned by the Commonwealth for Metropolitan Park purposes; thence northwesterly along said division line ninety-one and sixty-five hundredths (91.65) feet to the intersection with the proposed taking line, said line at this point being a curved line of twenty-seven hundred and seventy-seven and five tenths (2,777.5) feet radius; thence northeasterly along said taking line two hundred and eighty-two and forty-two hundredths (282.42) feet to a compounding point with a curved line of seven hundred and seventy-seven and five tenths (777.5) feet radius; thence northeasterly along said curved line of seven hundred and seventy-seven and five tenths (777.5) feet radius two hundred and sixty-nine and twenty-nine hundredths (269.29) feet to a point of reverse curvature with a curved line of seventy (70) feet radius; thence northeasterly and northerly along said curved line of seventy (70) feet radius sixty-seven and six tenths (67.6) feet to a tangent point in the division line between land of the Cambridge Hospital and land

of the City of Cambridge at the point of beginning. Containing forty-three thousand eight hundred and forty-seven (43,847) square feet, divided between flats, sixteen thousand three hundred and sixty (16,360) square feet, and upland, twenty-seven thousand four hundred and eighty-seven (27,487) square feet.

The foregoing described land is shown upon plan No. 5,208, drawn by Lewis M. Hastings, City Engineer, dated June 27, 1899, and on file in his office, a copy of which plan is to be recorded in the Middlesex South District Registry of Deeds, reference to which is hereby made for a more particular description of the lot taken.

*So, therefore, be it known,* that the parcel of land, together with all the buildings and structures thereon, hereinbefore mentioned and particularly described, on this twenty-seventh day of November, A.D., 1899, is hereby taken by the City of Cambridge, as aforesaid, for the purpose hereinbefore set forth, assessments for the cost and expenses thereof to be laid under the provisions of Sections 6 and 7 of said Chapter 341 of the Acts of 1892; and it is hereby

*Ordered,* That in accordance with the requirements of Section 2 of said Chapter 341 of the Acts of the year 1892, hereinbefore mentioned, the City Clerk be and hereby is directed to cause to be recorded, in the Registry of Deeds of the Southern District of the County of Middlesex, a description of the aforesaid taking sufficiently accurate for identification, with a statement of the purpose for which the same was taken, which statement shall be signed by the Mayor.

Also that the City Clerk be requested to send notice of this taking to the owners of record of the land hereby taken.

#### WORK OF THE YEAR.

There has been but little park construction work during the past year, yet by reason of the pleasing fiction that whatever is given to the Park Department to do is park work, and therefore chargeable to park construction, and payable out of an issue of bonds designated "Park Loan," the account of the City Treasurer's books headed "Park Construction" shows an expenditure of \$105,438.81.

As matter of fact, the department has been largely engaged during the year in constructing a bathing beach and bath house, and in laying out roadways to improve the value of and render marketable real estate in various sections.

The construction of the driveway and the preparatory work for planting trees, from West Boston Bridge westward on the Esplanade, is a property development undertaking. The work of extension of the Esplanade up the river is for the purpose of obtaining a connection through to existing streets in Ward 4, so as to bring the abutting property into notice and render it accessible and marketable.

The construction of the park roadway between Brookline and Magazine Streets is for a similar reason. The construction of the bathing beach and bath house was imposed on us by a sudden popular demand.

These four pieces of work have cost \$85,846.78 out of a total charge to construction of \$105,438.81. Of the balance \$11,483.71 has been used

in the construction of the triangle at the corner of Mount Auburn and Bath Streets, and in necessary work caused by settling, and \$8,108.32 in general accounts, etc.

In December of this year, by an arrangement with the trustees of the Cambridge Hospital, the city acquired a strip along the river front of their property, about 491 feet in length and 80 feet in width.

During the coming year it is proposed to construct a beach along this strip to connect our present work with the taking at Gerry's Landing of the Metropolitan Park Commission. In addition to the beach there will be a tree planting space and a twenty foot walk.

The trustees of the Hospital very generously gave this strip of land to the city, the only condition being that the city should erect along the line a light iron fence of the kind standing between the Hospital and Park property at the present terminus of constructed work.

It has seemed to the Board very desirable that this bit of river front should be acquired and developed. As said above, it connects our present work with the proposed Metropolitan work; it is the last link and a short one in the river chain, so far as Cambridge share of up-river work is concerned, and from the point of view of the observer, owing to the contour of the bank, is the natural termination of the park work.

In this connection it seems proper to call attention to the desirability of the construction, by the State, of the bridge and boulevard connection between the Speedway and Fresh Pond. The State has acquired, with the consent of the city, all the land necessary for this purpose, all lying within our limits. So far as the takings are of private property, they diminish the amount of property taxable by the city. The construction of the boulevard will, nevertheless, increase the amount of taxable property by making abutting property more accessible and marketable, and will be of material benefit to the city by enabling it more easily to meet its share of the cost of the Metropolitan Park construction which, by law, is to be assessed upon all cities and towns within the Metropolitan district. The longer the boulevard remains unconstructed, the longer the city is deprived of the benefit of its past or future value for taxation.

The construction of the bridge over the river between the Speedway and Gerry's Landing is urged. With the park development on the Longfellow Marsh, the reconstruction of North Harvard Street, the work of this Commission between Boylston Street and the Hospital, it seems that the bridge connection is desirable not only that the circle should be completed, but to enable those coming from Watertown and beyond, and Arlington and beyond, to more easily reach the Speedway, Brighton, and Brookline, than is now the case.

The extension of the boulevard from Fresh Pond to the Mystic Valley Park System is also urged as one of great value to the city and of great convenience to our citizens and those of other towns and cities.

#### SECTION D.

##### ROADWAY BROOKLINE STREET TO MAGAZINE STREET.

In pushing the work on this section of the river road, it has been the purpose of the Commissioners to provide an attractive driving entrance to Cambridge from Brookline Bridge that will be free from car tracks and from heavy teaming. It is the beginning of the river road which will connect Brookline Bridge with Boylston Street and Harvard Square. It is the intention of the Commissioners to complete the section between Brookline Street and Magazine Street, and to plant the trees (red oak) early in the spring.

If the appropriation permits, it will be a wise policy to continue the road across the marsh to River Street.

##### CAPTAIN'S ISLAND.

The Commissioners did not contemplate doing any work at Captain's Island for some years, but the demand for a bathing beach forced a change in the plans made for the season's work. A large force of men has been engaged in grading and laying out this most attractive spot, which will be ready early in the spring for lawn, shrub and tree planting. For beauty of location on the river and for popular use it is the gem of the entire park system.

##### BATHING BEACHES.

The Commissioners contemplated building at Captain's Island a small, temporary beach with limited accommodations, but the immediate demand was so pressing that they felt compelled to enlarge upon their plans and to make some more permanent provisions. This was done by the construction of a beach of river gravel, with a slope of 1 in 13 for a length of 430 feet. The old Magazine was used for a bath house and served the purpose admirably, but the extent to which the beach was used showed conclusively the necessity of much larger accommodations in the future, and plans have been prepared for two additional bath houses,— one for men and one for women. After beginning the grading one step necessitated another, and as there seemed to be no point at which the work could be profitably stopped, the Board carried it through to completion, at an expense of about \$14,000.00, thus anticipating work which it was expected would not be required until later. There is no question but that Captain's Island bathing beach is unequalled by any artificial beach in this vicinity. The water of the river is clean, and its temperature much higher than the water at Revere Beach.

During the past season about 20,500 people used the bathing beach,

BEACH AT CAPTAINS ISLAND.

THE HELIOTYPE PRINTING CO., BOSTON.





of which about 1,500 were women and girls who were poorly accommodated by the two iron voting booths located near the beach. To build proper bath houses an expenditure of about \$15,000 is required.

The maintenance of this bathing beach will require an officer, two life guards, three bath house men and one woman. It is possible that the wages of one of the men can be met from renting bathing suits. This question is receiving the consideration of the Board, and undoubtedly will be satisfactorily solved at the proper time.

To provide proper bathing facilities, where the people will be served without prejudice to other interests, is a problem that requires careful consideration. How much money can be devoted to this specific object without prejudice to other work also requires careful consideration. It can be assumed that Captain's Island is admirably adapted for the purpose, and that the bathing beach built during the past summer met with popular approval. It is possible to build a similar beach at the East Cambridge front by taking away a portion of the sea wall. It is quite reasonable to suppose that this, too, will prove to be a suitable and fitting place for a bath house. To locate one elsewhere on the Cambridge side of the river does not appear feasible, as the lack of width of the shore taking would seem to prevent.

On the Boston side, however, the Metropolitan Commissioners have ample facilities for building a beach with bath house accommodations between Boylston Street and Western Avenue Bridges, and likewise on the shore above Gerry's Landing.

The construction of a beach and bath house at East Cambridge front will cost in the vicinity of \$25,000. While there is no question about the necessity of a bathing beach at this point, it is questionable if so large a sum should be taken in one season from the funds for river construction work, in addition to the amount it is necessary to spend to complete the bath houses at Captain's Island.

If the City Council, in its judgment, considers it wise or necessary to do this work at once, it seems only proper that a separate loan be made for the purpose, otherwise the Park Board will find it impossible to carry on other river work which is necessary to get the quickest returns on the large sums already expended.

Placing a bathing beach near a purely residential district may be a hazardous experiment. While Captain's Island is to become a centre of summer out-door life, and people will flock there by hundreds and get much enjoyment from it, the residents along Magazine Street look at the proceeding with many misgivings. Justly so—for during the past season, because of inefficient police protection to the street, they have been subjected to serious annoyance from boys and young men with hoodlum

tendencies who have daily passed through the street to and from the beach. These annoyances at one time assumed such alarming proportions that a petition was circulated and signed by many of the residents of Magazine Street, praying that the Commissioners close the bath house and alleging that property on the street was being depreciated in value in consequence.

The Board therefore suggests to the City Council the expediency of demanding a police service for Magazine Street which shall protect the residents of that thoroughfare during the months when the bath houses are open. The Commissioners have no difficulty in maintaining order at the beach, although the irrepressible hoodlum boy is in evidence, there he is in a minority and under the watchful eye of the park officer; but when off park limits his pent up emotions, good and bad, are given full play and the unoffending resident along the thoroughfare is made to suffer thereby.

The experience of the Commissioners at the temporary beach at Captain's Island, the past season, compels them to frankly admit that they had not anticipated such phenomenal use as was made of it. They now believe that proper and suitable bath houses should be built there at once and that a similar work be begun at East Cambridge front, but in order that this may be done at once without prejudice to park construction they reiterate their opinion that it should be done by a bath house loan and so recommend.

### PARKS, SQUARES AND COMMONS.

#### CAMBRIDGE FIELD.

The field is rapidly becoming a thing of great beauty. As the trees and shrubs increase in size its appearance reveals the skill and foresight of the landscape architects. In the matter of use but little is left to be desired, and the field serves its purpose admirably.

The only unsatisfactory feature is the condition of the playground. This, it will be remembered, is filled land. The winter's frost throws up all the small stones in the filling and scatters them over the field, making a very objectionable surface for games of any sort. No amount of care seems to remedy the difficulty. The Commission is advised and believes that the only alternative will be to spread a loam surface and seed down to grass. Such a course would be very expensive, besides depriving people of the use of the field for a whole season.

#### RINDGE FIELD.

No work except the necessary cutting of grass has been done, during the past year. The field is used to a limited extent by children and young men, but not sufficiently to justify the Commissioners in any expense for immediate development.

## HASTINGS SQUARE.

Considerable work in the past, although not during the present year, has been done on Hastings Square in deference to many repeated requests, but the result is far from satisfactory. The Board believes that some radical changes must be made before anything satisfactory will be obtained. The double rail fence around the square should be removed, a large number of trees should be cut down, and a different scheme of planting devised. Under the best of conditions it is difficult to deal with a formal rectangular piece of land of the area of Hastings Square, but it is believed that much better results than now exist can be obtained. The work which has been done heretofore has been mainly in the removal and cutting out of trees. Before this work was completed the Commissioners yielded to many protests and ceased operations. It is believed, however, that no satisfactory treatment of the square can be had without considerable more cutting out of trees.

Dana Square, Winthrop Square, Washington Square, Broadway Common and the Public Common need no special mention at this time.

## SHADE TREES.

An unusual amount of work has been done during the year in the matter of removal, trimming and planting of the shade trees. Ever since the care of the trees was transferred to the Park Department it has been endeavoring to systematize the work, but the insufficient appropriation for maintenance of the department has not enabled it to make much progress in that direction. As was stated in the previous report, satisfactory work can only be accomplished by the employment of a tree inspector, whose sole duty should be a periodical patrol and inspection of the whole city in order to detect decay of the trees and remedy the same when possible; to report the location of dead or dying trees; to cause the necessary trimming of dead branches and of live branches which interfere with buildings or other structures or other trees; to place and repair guards; to see that trees do not receive too much or too little nourishment; to investigate and report upon applications for removal and planting. Under the present conditions, the department has to rely upon the individual attention of the Commissioners and Superintendent and upon such casual reports as are brought to it by the police or complaints from citizens. The result is far from satisfactory, in that not only many or most cases where action is necessary are brought to its attention too late for proper treatment, or the city is subjected to the possibility of large damages for injuries which might have been prevented if known, and the impression becomes general that this branch of the work of the department is being neglected.

In making up the estimates last year for maintenance appropriation the sum of \$500 was included for the employment of a tree inspector, but owing to the large cut down of the estimates, the department was unable to devote any money for such purpose. The necessity of such an appropriation is again urged. One year's interest upon a single claim for damages caused by a falling branch or tree would pay the whole cost of a tree inspector.

The city has lost and is losing, at a constantly increasing rate and rapidity, many of its finest trees, particularly elm trees, for these seem to be far more susceptible than others to whatever may be the sources of danger. The department has taken the best advice obtainable as to the causes and reasons, and finds that no one cause is responsible in every case. In many instances the trouble is directly traceable to escaping illuminating gas, in others to escaping sewer gas, in others to what is believed to be escaping electric currents. In these cases the appearance of the roots of the trees and the odor of the wood or of the soil about the roots determines the cause. There is also the usual low percentage of decay due to death from borers or other insects, but nothing more than is ordinarily anticipated.

There nevertheless remains the large majority of cases where none of the above causes can be attributed, and where the trouble can not be definitely located or named. It is believed that in such instances the cause is to be found in insufficient or in too much nourishment, and that these causes are a natural result of our method of street and sidewalk construction. This belief is shared by Prof. Charles Sargent of the Arboretum and our landscape architects. The lack of nourishment is caused by the fact that all the soil upon which the tree roots depend for sustenance is covered by a surfacing which prevents the making of new soil and prevents moisture from soaking through, but carries it off through the street gutters to the catch basins and sewers. The hard macadam of our streets, the paving of our gutters, the brick, asphalt, stone or concrete of our sidewalks, the proximity of our buildings to the sidewalk line, tends to carry off surface water and prevent its absorption into the soil. It is to be remembered that the nourishing roots of a tree are not the anchor roots commonly observed at its base, but are the small slender shoots from the anchor roots which may be ten to fifty feet or more from the base of the tree.

The superabundance of nourishment which may be fatal to a tree may be illustrated by having in mind the difference in the effect of a breeze or a draught upon an individual. A healthy man who is exposed to a breeze will not ordinarily take cold, because the breeze being applied to all parts of his body simultaneously reduces his temperature even

hroughout. If the same individual is so placed that the same breeze is applied to one portion of his body only, there is produced that unevenness of temperature in different parts of the body which brings about a cold.

So when the tree roots receive a substantially equal amount of moisture, as is generally the case when nature is left to itself, the tree thrives. If, however, some roots receive all and others none or substantially none of the moisture, those receiving it only being able to absorb a certain amount of it, the tree itself as a whole, therefore, receives too little, yet certain roots receive too much, and, like a tree which is planted in a pool of water, begins to decay and eventually dies from a superabundance of moisture. This condition is met in many trees standing in our streets where a soil space has been left at the base and into which goes all the surface water which the brick sidewalk, paved gutter and macadam surface are not able to carry off.

It was with this belief in mind that Professor Sargent advised the changes which the department has made in the surrounding soil at the base of the Washington Elm, and it is expected that the result will justify the belief and expense.

Of course it is not expected that much can be accomplished or is practical in the way of remedy. It is found that trees will live for a great many years under the conditions referred to, but that the life of the tree is materially shortened after it has obtained a certain mature growth. Illustrating again by the case of an individual, it may be likened to a disease which will not tend to attack a man before the age of fifty but is likely to prevent his living beyond the age of sixty.

It is therefore to be anticipated that for the above reasons we shall lose many of our older trees, but such anticipation is no argument against planting new ones in their places, because the latter will have many years of usefulness.

So far as it is practicable to remedy any of the causes of trouble referred to, the department will do all in its power.

#### EXTENSION OF ESPLANADE.

Aside from the small amount of work proposed in the construction of the beach on the hospital river bank, and such bathing beach and bath house requirements as shall be demanded, the Commissioners propose no other work during the coming year except in the direction of extension of the esplanade from the end of the sea wall west of Harvard Bridge. In their last report the Commissioners stated such to be their intention, but the demand for the bathing beach was such that all their time and energies were turned in that direction, with the result that no extension of the esplanade was made.

It is especially necessary since building operations have actually begun on the Esplanade, that a connection through to existing streets like Putnam Avenue or Henry Street, should be made. In the judgment of the Commissioners, the quicker such connection is made the quicker will buildings and people be attracted to the Esplanade.

It is intended to carry the stone wall only about 280 feet further up the river, and to begin beach work at this point, thus adding a variety to the appearance of the shore and materially diminishing expense. Neither will the double roadway be carried further, as it is believed that a single road will answer all purposes.

#### QUASI STREET WIDENINGS.

Two cases of quasi street widenings during the past year,—one accomplished and one proposed—have been brought to the attention of this department, because such widenings necessitated a wholesale cutting of some of our finest shade trees.

In the month of April of the present year the City Council, upon petition of the Boston Elevated Railroad, and without formal notice to this department, granted the railroad company the right to construct double tracks through Prospect Street. Upon examination of the premises acting upon the suggestion of the Mayor, that the projection of the trunks of many of the shade trees into the street would thereby, owing to the narrowness of the street, be a source of danger to vehicles, it was found that thirty-nine trees, mostly elms, and many of them very handsome specimens, projected their trunks into the street sufficiently to be dangerous to users of the street. After a hearing by this Board to all interested at which the nearly unanimous sentiment was against the removal of the trees; after appeal to the Railroad Commissioners from the action of the City Council granting the locations to the railroad company, and affirmation of the order by the Railroad Commissioners, coupled with an expression of hope that some way would be found to preserve the trees; after suggestion by this Board to the Mayor that a slight change of the curbing would result in obviating the necessity of the removal of most of the fine trees without unduly narrowing the street; after disapproval by the Mayor of such suggestion, this Board felt compelled to order the removal of all the trees referred to. The result is a commonplace appearing street in place of a remarkably handsome thoroughfare.

The proposed case of quasi widening is that of Concord Avenue from Arsenal Square to Sparks Street. It is proposed to grant locations to the Elevated Railroad for double tracks on Concord Avenue. There is no curbing, except in scattered places, on either side of the street between the two points named. But the location of a curbing to give the usual

width of sidewalk will bring thirty trees on the westerly side of the avenue mostly or entirely into the street. Most of these trees are large and very handsome elms. There is no doubt that if double tracks are laid, the trees will be a source of danger and will have to be removed. The result will be the same as on Prospect Street; an attractive residential avenue will become an uninteresting appearing street. The value of property will naturally depreciate, with a consequent change in the class of occupants. In time new trees will grow but the character of the neighborhood is not likely to improve, nor the present value of the property to be equalled.

It will be seen that in both cases this Board is practically powerless. The only question presented to it has been to determine whether or not the trees are dangerous to travel. It seems to the Board that such question can be decided by the city government or the street department, and should be one of the questions to be taken into consideration in determining the main question of granting locations for double tracks or of street widenings.

So long as this Board has no authority or voice in determining such questions, all responsibility for the causes necessitating the removal of the trees must be confined to the City Council.

#### FUTURE CONSTRUCTION.

The Commissioners feel that the development of the river front should in the immediate future be extended easterly from Boylston Street. This plan necessitates the removal of the coal wharf and sheds now occupied by the firm of Richardson & Bacon. The property occupied by them was leased from Harvard University. The city acquired the title to the property by the taking of January 25, 1894, and since that time has permitted Richardson & Bacon to occupy it as tenants at will, under a nominal rent, until such time as the Commissioners should desire to enter upon and develop the property.

The Commissioners, feeling that it was proper and only fair to give Messrs. Richardson & Bacon a sufficiently long notice of their intention to enter upon the property and terminate their tenancy, have within the past few weeks given notice of their intention to terminate the tenancy on January 1, 1901. This action gives to Richardson & Bacon over a year within which to make necessary arrangements for a transfer of their business to a new situation.

With a similar expectation of an extension of the development of the river front on the Boston side of the river, the Metropolitan Park Commission has notified Mr. J. A. Heaton, who occupies a coal wharf opposite

Richardson & Bacon, as tenant of the Metropolitan Commission under a lease which expires in January, 1901, that it is not its intention to make any renewal of his lease.

By the elimination of these two coal wharves from the river front, the appearance of the river from Boylston Street will be very much improved, especially as the construction of the new Harvard Boat House on Soldier's Field will result in the immediate removal of the unsightly boat house buildings at the foot of DeWolf Street.

There remains to be referred to in this connection the matter of the necessity for a new bridge over the river at Boylston Street. No one can deny that a new bridge is very necessary. The experience of every one attending any of the large games on Soldier's Field is of positive fear of an accident, by reason of the age, the instability, the narrowness of the bridge, and the fact that it forms the small end of the funnel into which is crowded all that those behind can push. Good police work has so far prevented an accident, but a crowd of 30,000 people, when once started, can make short work of a few policemen. Then a catastrophe is likely. The cities of Cambridge and Boston and the Metropolitan Park Commission should at once take up the matter seriously and proceed to the construction of a suitable bridge without delay. Such a bridge, however, should be planned with proper regard for its uses and for its surroundings. It should of course be of the full width of the street, without a draw if possible and of a construction to properly harmonize with the park work on both sides of the river. The river is not wide at this point and the cost cannot be very large.

#### THE COST OF PARK WORK.

In the six years of park construction (1893-1899) there has been spent for land and development the sum of \$1,078,109.63, the entire sum being obtained from the proceeds of 4 and  $3\frac{1}{2}$  per cent. thirty and forty-year bonds.

Of this amount \$105,000 was spent during the past year. The average for the six years is about \$180,000.

The interest and sinking fund charges for 1899 upon the whole outlay amount to about \$55,530. The cost for maintenance during this year has been \$14,497.01.

Therefore the total cost to the city for this year is \$70,027.01, an increase of about \$8,000 over last year. Of this increase \$1,500 came from increased maintenance appropriation and \$6,500 from interest and sinking fund charges on the additional issue of bonds of \$100,000.

Based upon the 1895 census (81,643) the cost per capita for the year 1899, of the whole park construction and maintenance, is 86 cents.

Based upon the 1899 tax rate of \$17.10 per thousand, 76 cents thereof represents the cost of the park work.

In other words, every man who has paid taxes upon \$1,000 has paid 76 cents towards the cost of park work.

The increase in the tax rate of 1899 (\$17.10) over that of 1898 (\$16.40) is not in any way due to park work, as the increase per capita for park expenses is only ten cents and adds but seven cents to its proportion of the tax rate of 1898 (69 cents). But the return in 1899 in the form of increased valuation of property benefited by park construction has largely offset the increased cost, so that our citizens have really had a large proportion of the entire work of the present year without expense.

A very satisfactory beginning is about to be made in the form of building construction near the Esplanade. An apartment hotel to cost \$750,000, it is expected, will be erected, as soon as weather permits, on the upper corner of Massachusetts Avenue and the Esplanade, fronting the latter. As a matter of interest to our citizens, because the first of the many similar buildings expected to be erected in that immediate vicinity in the near future, the Commissioners have inserted in this report a perspective elevation of this building.

This hotel will have one hundred and thirty rooms, arranged in suites adapted for one to six persons and will accommodate from two hundred and fifty to four hundred persons, the rentals being placed at a figure calculated to assure its occupancy by that class of people necessary to insure a suitable and desirable neighborhood. As the building is the pioneer of that section, it is not to be anticipated that the returns from taxation thereof will be based upon its full value, yet it will at once be seen that upon any reasonable valuation the return in taxes will be considerable.

It has cost the city to the present time the sum of \$210,329.21 to bring the Esplanade to its present condition, including cost of sea wall and filling, and but for that expense no development of that portion of the river front would have been possible. The charges for interest, sinking fund requirements and maintenance of the Esplanade during the year 1899 were about \$10,800.00.

The new hotel alone will return in taxes enough to take care of at least three-fourths of the above charges.

## FINANCIAL STATEMENT.

### PARK LOAN.

Amount appropriated December 7, 1898	:	:	:	:	:	\$27,583	18
Amount appropriated March 23, 1899	.	.	.	.	.	100,000	00
						\$127,583	18

**PARK MAINTENANCE.**

Amount appropriated March 16, 1899 . . . . .	\$13,500 00
Amount appropriated November 2, 1899 . . . . .	998 60
	<u>\$14,498 60</u>

During the year bills payable from Park Loans have been approved by the Board and certified to the Auditor to the total amount of \$105,438.81, as follows:—

**PARK LANDS AND CONSTRUCTION.**

<i>River Parkway, Section A.</i>			
Construction account . . . . .	\$29,705 81		
Land account . . . . .	325 00		
	<u>      </u>	<u>      </u>	<u>*\$30,030 81</u>
<i>River Parkway, Section B.</i>			
Construction account . . . . .	\$23,753 08		23,753 08
<i>River Parkway, Section C.</i>			
Construction account . . . . .	180 26		
Land account . . . . .	3,237 03		
	<u>      </u>	<u>      </u>	<u>3,417 29</u>
<i>River Parkway, Section D.</i>			
Construction account . . . . .	\$28,645 60		28,645 60
<i>River Parkway, Section F.</i>			
Construction account . . . . .	308 21		308 21
<i>River Parkway, Section G.</i>			
Construction account . . . . .	6,549 97		
Land account . . . . .	4,933 74		
	<u>      </u>	<u>      </u>	<u>11,483 71</u>
<i>Nursery.</i>			
Construction account . . . . .	913 30		913 30
<i>Washington Elm.</i>			
Construction account . . . . .	439 98		439 98
<i>East Cambridge Embankment.</i>			
Construction account . . . . .	425 37		425 37
<i>Rindge Field.</i>			
Construction account . . . . .	135 64		135 64
<i>Cambridge Field.</i>			
Construction account . . . . .	128 25		128 25
<i>General Account.</i>			
Construction account . . . . .	4,346 44		4,346 44
<i>Office Expenses.</i>			
Construction account . . . . .	1,411 13		1,411 13
Total amount expended . . . . .			\$105,438 81
By moneys received Cr. to Section A . . . . .			5,437 33
	<u>      </u>	<u>      </u>	<u>      </u>
Balance unexpended . . . . .			\$100,001 48
			27,581 70

\*\$5,437.33 should be deducted from this amount for moneys received and credited to Section A.

During the year bills payable from Park Maintenance have been approved by the Board and certified to the Auditor to the total amount of \$14,497.01, as follows:—

Shade trees . . . . .	\$4,619 58
Cambridge Field . . . . .	3,090 36
Commons and squares . . . . .	2,776 39
The Shelter . . . . .	2,615 65
Public grounds . . . . .	956 58
General account . . . . .	<u>438 45</u>
Total amount expended . . . . .	<u>14,497 01</u>
Balance of appropriation unexpended . . . . .	<u>\$1 59</u>

From the above it will be seen that the amount expended during the year under Park Loans was divided as follows:—

Construction account . . . . .	\$96,943 04
Land account . . . . .	<u>8,495 77</u>
Total . . . . .	<u>\$105,438 81</u>

A detailed classification of the expenditures will be found in the report of the General Superintendent.

Since the beginning of the work in 1893, there has been expended to date, of money raised under Park and Esplanade Loans, the sum of \$1,078,109.63.

The division is as follows:—

*River Parkway, Section A.*

Construction account . . . . .	\$151,696 10
Land account . . . . .	<u>1,901 83</u>
	<u>\$153,597 93</u>

*River Parkway, Section B.*

Construction account . . . . .	\$56,731 28
	<u>56,731 28</u>

*River Parkway, Section C.*

Construction account . . . . .	231 13
Land account . . . . .	<u>4,650 58</u>
	<u>4,881 71</u>

*River Parkway, Section D.*

Construction account . . . . .	\$45,878 90
Land account . . . . .	<u>95,047 25</u>
	<u>140 ,926 15</u>

*River Parkway, Section E.*

Construction account . . . . .	\$18 75
Land account . . . . .	<u>25 00</u>
	<u>43 75</u>

*River Parkway, Section F.*

Construction account . . . . .	\$21,591 80
Land account . . . . .	<u>66,432 36</u>
	<u>88,024 16</u>

*River Parkway, Section G.*

Construction account . . . . .	\$119,377 00
Land account . . . . .	<u>85,614 82</u>
	<u>204,991 82</u>

*Cambridge Field.*

Construction account . . . . .	\$124,417 65
Land account . . . . .	<u>78,884 85</u>
	<u>203,302 50</u>

## CITY OF CAMBRIDGE.

*East Cambridge Embankment.*

Construction account . . . . .	\$86,672 67
Land account . . . . .	45,231 40
	<u>                        </u>

\$131,904.07

*Ridge Field.*

Construction account . . . . .	\$8,745 44
Land account . . . . .	31,461 85
	<u>                        </u>

40,207 29

*Broadway Park.*

Construction account . . . . .	\$11,308 65
	<u>                        </u>

11,308 65

*Nursery.*

Construction account . . . . .	3,462 67
	<u>                        </u>

3,462 67

*Winthrop Square.*

Construction account . . . . .	1,866 26
	<u>                        </u>

1,866 26

*Hastings Square.*

Construction account . . . . .	943 61
	<u>                        </u>

943 61

*Washington Elm.*

Construction account . . . . .	439 98
	<u>                        </u>

439 98

*General Account.*

Construction account . . . . .	30,464 80
	<u>                        </u>

30,464 80

*Office Expenses.*

Construction account . . . . .	9,507 39
	<u>                        </u>

9,507 39

Less park revenue for 1894 and 1896 merged into land and construction accounts . . . . .

\$1,082,604 02

4,494 39

\$1,078,109 63

Of the whole amount of Park Loans expended to December 1, 1899, 38 per cent. has been for land and 62 per cent. for construction, as follows:—

Land account (less "revenues") . . . . .	\$404,755 55
Construction account . . . . .	673,354 08
	<u>                        </u>

\$1,078,109 63

Respectfully submitted,

GEO. HOWLAND COX,  
WILLIAM M. RICHARDSON, }  
EDMUND REARDON, } *Park Commissioners.*

# REPORT OF THE GENERAL SUPERINTENDENT OF PARKS

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CAMBRIDGE, December 1, 1899.

*To the Board of Park Commissioners of the City of Cambridge:—*

GENTLEMEN:—I have the honor to present my third annual report as General Superintendent of Parks, covering the financial year 1899.

## RIVER PARKWAY.

### SECTION A.

The filling of the flats at Section A, which was commenced under contract dated May 10, 1897, was completed March 30, 1899. The total cost of reclaiming these flats between West Boston Bridge and the bulkhead which formed the eastern boundary of the Charles River Embankment Company's property, was \$142,394.89, or 30 cents per square foot. This amount was divided as follows:—

Sea wall	.	.	.	.	.	.	\$77,629	63
Filling flats	.	.	.	.	.	.	51,536	25
Ballast	.	.	.	.	.	.	12,961	14
Engineering etc., 1897 to May 1899, inclusive	.						4,050	70
							\$146,177	72
Received for land taken by Bridge Commission							3,782	83
							\$142,394	89

The work done by the department at this section this year consisted in continuing the four rows of tree spaces from Section B to within 500 feet of Main Street, and building the inner sidewalk and roadway connecting those at Section B with Main Street. The tree spaces were not completed until the fall so no trees were planted.

The material which was dredged from the river to fill this section is a very sandy gravel and has very little or no binding quality. An attempt was made to roll the roadway with horse section rollers and later with a ten ton steam roller, but it was impossible to produce a hard durable surface. It may be necessary to surface this road with a binding

material which should be worked well into the surface before being rolled, or else a binding quality might be obtained by sufficient rolling so as to break up some of the gravel into powder.

As soon as possible the watering system should be extended from Section B to Main Street, so that the trees as soon as they are planted may receive sufficient water. This section is so exposed that the natural moisture is not sufficient for newly planted trees.

It is estimated that it will cost about \$13,270 to complete Section A, not including planting or lighting. This estimate is made up as follows:—

Loam . . . . .	\$9,170 00
Drainage system . . . . .	1,130 00
Binding surface for both roads . . . . .	1,090 00
Preparing loam spaces . . . . .	900 00
Shaping and rolling roads . . . . .	535 00
Watering system . . . . .	445 00
	<hr/>
	\$13,270 00

#### SECTION B.

The construction work at this section this year consisted chiefly in extending the work completed in 1898 easterly 630 feet and westerly 550 feet, completing the loam spaces, drainage system, roadways and tree planting. Four men have been constantly employed caring for the grass, trees, etc., of last year's completed work.

The same plan of construction as described in last year's report was carried on, using about 15 cubic yards of loam for each tree and a foot and a half of loam on grass and planting spaces. Shrubbery has been planted in the four central loam spaces. This year, loam to the amount of 11,173 cubic yards was used at this section, costing \$10,039.34 or 90 cents per cubic yard. The watering system has been carried 1010 feet westerly.

It will cost about \$690 to complete Section B easterly to Section A, not including planting and lighting, as follows:—

Binding surface for both roads . . . . .	\$330 00
Watering system . . . . .	200 00
Shaping and rolling roads . . . . .	160 00
	<hr/>
	\$690 00

#### SECTION C.

No construction work has been done at this section.

It has been estimated that it will take about 300,000 cubic yards of filling to complete this section in accordance with the proposed beach plan.



CITY OF CAMBRIDGE - PARK COMMISSION  
CHARLES RIVER PARKWAY  
SECTION D.

"CAPTAINS ISLAND."

SCALE  
1000 ft.  
100 200 300 400 500

Geo. Howell & Co., Chrmn  
Orville W. Richardson  
Edmund N. Richardson

COMMISSIONERS  
L.M. Hartung  
CITY ENGINEER

Olmsted Bros. Landscape Architects  
Brookline, Mass.



There is about 280 feet of wall to be built from end of present wall to the proposed bastion, and about 120 feet of wall or bulkhead from bastion in towards the beach.

## SECTION D.

The most important work at Section D this year has been the construction of the park road between Brookline and Magazine Streets. In August a contract was made with William B. Mullen to furnish between 17,000 and 20,000 cubic yards of clean filling for this work, at a price of 58 cents per cubic yard. This contract was completed November 21, 19,821 cubic yards having been delivered. It will require considerable more filling on this work before the gravel surfacing is put on, on account of the enormous settlement which has been going on since the work commenced. The original estimate for this work, not allowing anything for settlement or compression was 13,840 cubic yards. It is probable that before the work is completed it will have taken at least 24,000 cubic yards, or nearly 75 per cent. more than the net estimate. A contract has been made with Mr. Mullen to furnish about 1,500 cubic yards of coarse surfacing gravel at 75 cents per cubic yard, and about 650 cubic yards of fine gravel at 85 cents per cubic yard. Undoubtedly enough sub-filling can be obtained this winter for 25 or 30 cents per cubic yard to finish the sub-grade so that the gravel may be spread early next spring.

The dyke which encloses the large area of marsh east of Magazine Street was finished last May, and since then the tides have been excluded from this field. This has added greatly to the appearance of the marsh as the old rank marsh grass has gradually given way to green meadow grass. Some settlement, due undoubtedly to the compression of the porous marsh mud, has taken place, but nothing of a serious character has been noticed. The expanse of this field is so great that its low elevation (about five feet less than the top of the dyke and park road) is not noticeable with the gradually sloping sides of the road and paths. It is hoped that this field may be flooded in winter for skating purposes, but it is very improbable that the marsh will hold water without a foundation having first been frozen.

If the park road between Magazine and River Streets is to be built to the same grade as the road just spoken of, it would be well to spread brush or planking under the fill to prevent some of the settlement.

The most popular work done by the department this year was the remodeling of the old Magazine Building into a locker-house, and the construction of a bathing beach at the foot of Magazine Street. In June operations were begun on the old stone building, which is supposed to have stood here since the Revolution, to turn it into a modern locker-

house. The old walls were leveled, the partition wall removed, the entrances made larger, and great gaps cut into the walls for windows. A shingled hip roof was put on, the walls were pointed and cemented, windows and doors put in, a hard pine floor laid, and one hundred and thirty-six lockers built. These lockers are 12 x 14 x 42 inches, and were erected in two tiers on either side of the room. The locker-house was used exclusively for men and boys, but it was soon found that some provision was needed for the accommodation of women and young girls. Two voting booths were placed at one end of the beach, and during the season it was estimated that about fifteen hundred women and girls made use of them. A matron was employed to preserve order, and help the little ones with their clothes. A janitor was employed in the locker-house, who unlocked and locked the lockers for the bathers, giving them a number corresponding to the number of their locker. This number was worn by the bathers hung around the neck by means of a rubber cord. It was estimated that about nineteen thousand men and boys used the locker-house during the season. The largest number of bathers noted in any one day was seven hundred and sixty, while the average daily attendance was about three hundred.

The construction of the beach was commenced in June. The old stone wharf was removed and the landing cut down to the grade of the beach. From this point the beach was extended down river about 430 feet and up river about 160 feet. In order to get a proper slope to the beach considerable marsh mud had to be cut away. This mud was used in the loam spaces to within six inches of finished grade. A part of the beach was built with bank gravel taken from the knoll on Captain's Island, but most of it was constructed with gravel dredged from the river.

The current at this point in the river is very swift, the water at some tides flowing sixty feet a minute. Life lines were used so as to enclose the entire space occupied by the bathers, while the beach was patroled by two life savers, in swimming apparel, and a park police officer.

The plan of Olmsted Brothers for the construction of Captain's Island has been carried out and completed, with the exception of the planting. The loam is placed and the planting can be done next spring.

#### SECTION F.

No construction work has been done at this section this year.

#### SECTION G.

The principal work on this section was the remodeling of the triangle at the corner of Mount Auburn and Bath Streets. By an order of the City Council, approved December 7, 1898, that portion of Bath Street lying between Mount Auburn Street and Charles River Road was discon-

tinued and made a portion of Section G. In order to accommodate the abutters an eight foot walk was built on the easterly side of Bath Street, running from Mount Auburn Street and connecting with the sidewalk of Charles River Road. The remainder of Bath Street has been turned into a grass lawn.

The other construction work was made necessary by settlement in the beach, road and loam spaces. The river gravel, which was stored on land of the Cambridge Gas Light Company in 1897, was used in raising the grade of the beach. Catch basins in the roadway were cut down to allow of the drainage of surface water. A large portion of the lawn near the Lowell willows was also regraded.

#### SECTION H.

A taking of 43,847 square feet, divided between flats, 16,360 square feet, and upland, 27,487 square feet, has been made along the shore of the Cambridge Hospital property from Section G to land of the Metropolitan Park Commissioners. This taking is to be designated as "Section H." It is estimated that it will take about 19,400 cubic yards of material to build the beach along this section.

#### WASHINGTON ELM.

Last May a large number of newspapers throughout the country printed alarming accounts of the supposed hasty decline of the Washington Elm, intimating that in a very few years the old historic tree would be a thing of the past. The usual care had been taken of the tree and no increase of decay was noticed, but to be on the safe side, Prof. Charles S. Sargent, of the Arnold Arboretum, was asked to examine the tree and make a report as to its condition. His report is as follows:—

ARNOLD ARBORETUM, HARVARD UNIVERSITY,  
JAMAICA PLAIN, MASS., May 31, 1899.

*H. E. Whiting, Esq., Board of Park Commissioners, Cambridge, Mass.*

MY DEAR SIR:—In compliance with your request I have made an examination of the Washington Elm in Cambridge. On the whole it does not appear to me to be in a worse condition than it was when I saw it three or four years ago. The number and condition of the leaves indicate considerable vitality, and the surface of old wounds is in a generally healthy condition. It is evidently suffering, however, from insufficient nourishment and from drought. The position of the tree on the crown of a much traveled street prevents rain-water from reaching it directly, while the general water table of the locality has no doubt been lowered by the sewer and water-pipe which pass close to the roots. I believe it is perfectly practicable to furnish the tree with a fresh supply of plant-food and, by some changes in the grade

of the street and its surface, to insure it a more abundant supply of water. If this is done there is reason to hope that the Washington Elm may continue to live for many years.

Yours very truly,

C. S. SARGENT.

In June plans were made by the City Engineer enclosing 886 square feet around the elm in a granite curbing, so planned that water would be accumulated in this space and allowed to reach the roots of the tree. Loam to a depth of one foot was put in this enclosure. This work was commenced the last of July and finished in about two weeks at a total cost of \$439.98.

No construction work has been done at Rindge Field, or on any of the commons or squares. Filling to the amount of about 8,100 cubic yards has been received at the East Cambridge Embankment.

#### PUBLIC GROUNDS.

Plans were made by the landscape architects last spring for the construction of the new Latin School grounds on Trowbridge and Ellery Streets. The work was performed by this department, and paid for by the Public Building Department. The plans call for a large gravel playfield between the Latin School and the English High School, and a fifty-yard cinder track back of the Latin School, so that ample room is provided for light out-of-door exercise. The work has been completed, with the exception of the grass and shrubbery planting.

The grounds of the Peabody School on Linnaean Street have been remodeled by this department, the work being paid for by the Public Building Department. Some planting should be done on these grounds next year.

Small amounts of loam or sod have been supplied to the Agassiz, Holmes, Willard and Wellington Schools, but as no appropriation was made for school house grounds, any money expended on them had to be taken from some other maintenance account, any of which could ill afford to lose even a small amount.

I hope that an appropriation of at least \$1,000 will be made next year for school-yard construction. This work is greatly needed and would be highly appreciated if done.

The work of remodeling the Public Library grounds which was commenced in 1897 has remained about as it was left in the fall of that year. An appropriation should be made for the completion of this work as soon as possible. New board walks will be needed for the Library grounds in the near future.

CITY OF CAMBRIDGE — PARK COMMISSION  
WASHINGTON ELM SQUARE.

SCALE  
1000

Gene Howard, Capt., Chairman  
William M. Richardson  
Edmund Readman

L. M. Hastings,  
City Engineer.

Shepard Congregational Society

Gardens Common.

• Drinking Fountain.

MASON ST.

GARDEN ST.

Roxbury College.

SECTION ON LINE A-B.  
SCALE  
1000



W. H. Gaskins, eng. des.



## SHADE TREES.

As soon as the ground was in suitable condition for tree planting, work of setting out trees on the streets in the spaces prepared late last year was commenced. The following trees were planted:—

Ulmus Americana (American Elm) . . . . .	147
Acer saccharinum (rock maple) . . . . .	51
Fraxinus Americana (white ash) . . . . .	38
Acer platanoides (Norway maple) . . . . .	3
	—
	239

During the year 482 trees were trimmed, 720 new wire guards were put on and 2,174 old guards repaired. A new system of putting wire guards on the trees has been inaugurated. Instead of the strip of zinc which has been used to protect the rough edges of the netting, a piece of stout telegraph wire is woven into either end of the netting, turning the rough edges around the piece of telegraph wire. This gives considerable stiffness to the guard and is much more durable than the old method.

Forty-three petitions for the removal of trees have been received by the Board, twenty-five of which have been granted. The trees removed during the year, including those dead or partly so, and those otherwise in an unsafe condition, are as follows:—

Ulmus Americana (American elm) . . . . .	77
Acer saccharinum (rock maple) . . . . .	52
Æsculus hippocastanum (horse chestnut) . . . . .	10
Acer dasycarpum (silver leaf maple) . . . . .	4
Acer platanoides (Norway maple) . . . . .	3
Fraxinus Americana (white ash) . . . . .	2
Larix (larch) . . . . .	2
Salix alba (white willow) . . . . .	2
Ulmus campestris (English elm) . . . . .	2
Acer rubrum (swamp maple) . . . . .	1
Betula alba (white birch) . . . . .	1
Populus alba (silver poplar) . . . . .	1
Populus canadensis (Canadian poplar) . . . . .	1
	—
	158

Twelve petitions for the moving of buildings through the streets have been reported upon, giving a detailed account of the necessary cutting of the public trees in each case. In several cases the cutting has been

very considerable, which soon led to the passing of a vote by the Board, "that no applications for the cutting of trees for the purpose of allowing buildings to be moved through the streets of the city will hereafter be entertained."

#### CAMBRIDGE FIELD.

In December, 1898, the play field was flooded for skating. From the last of December to the first of February about four acres of ice were maintained in good condition and skating was enjoyed by thousands of people. A fifty-one inch ice-plane was purchased and used with excellent results.

During the summer and autumn months the field was used to considerable extent in games of base ball, foot ball, hurley, etc. Through the generosity of the Cambridge City Band, whose services were given without compensation, six band concerts were given at the shelter during the months of July and August. These concerts drew large crowds of people to the field and were greatly enjoyed.

Cambridge Field has been kept in excellent condition under the direction of the Field Superintendent. There have been twenty-nine arrests by the park police.

#### THE YEAR'S EXPENDITURES.

The expenses of the department for the year are shown in the following summary of the departmental accounts:—

##### PARK LOANS.

Amount appropriated December 7, 1898 . . . . .	\$27,583 18
Amount appropriated March 23, 1899 . . . . .	100,000 00
Amount appropriated June 29, 1899, money received Cr. to Section A . . . . .	1,654 50
Amount appropriated September 21, 1899, money received Cr. to Section A . . . . .	3,782 83
	\$133,020 51

##### EXPENDED.

###### River Parkway, Section A.

Filling Flats . . . . .	\$23,466 14
Pay roll . . . . .	3,140 53
Loam . . . . .	1,641 60
Engineering . . . . .	594 93
Teaming . . . . .	545 58
Examination of titles . . . . .	325 00
Watering system . . . . .	142 88
Filling . . . . .	91 19
Stakes for engineers . . . . .	23 50
Lumber . . . . .	19 45
Carpentering . . . . .	16 75
Signs . . . . .	14 00
Use of horse roller . . . . .	9 00
Printing and advertising . . . . .	26

————— \$30,030 81

*Amounts carried forward . . . . .*

\$30,030 81 \$133,020 51

<i>Amounts brought forward . . . . .</i>	\$30,030 81	\$133,020 51
<i>River Parkway, Section B.</i>		
Loam . . . . .	\$10,039 34	
Pay roll . . . . .	7,405 84	
Teaming . . . . .	2,282 41	
Drainage system . . . . .	863 85	
Filling . . . . .	770 04	
Shrubs . . . . .	499 33	
Engineering . . . . .	490 78	
Watering system . . . . .	403 88	
Trees . . . . .	327 30	
Steam roller . . . . .	218 75	
Tools and hardware . . . . .	127 43	
Grass seed . . . . .	97 60	
Lumber . . . . .	75 67	
Tree poles . . . . .	39 00	
Stakes for engineers . . . . .	37 00	
Manure . . . . .	35 13	
Signs . . . . .	14 00	
Fire hose . . . . .	9 50	
Lawn boots . . . . .	7 50	
Printing and advertising . . . . .	7 23	
Hose for trees . . . . .	1 50	
	<hr/>	\$23,753 08
<i>River Parkway, Section C.</i>		
Lands . . . . .	\$3,226 83	
Engineering . . . . .	159 63	
Pay roll . . . . .	19 00	
Recording documents . . . . .	10 20	
Blue prints . . . . .	1 63	
	<hr/>	\$3,417 29
<i>River Parkway, Section D.</i>		
Filling . . . . .	\$11,821 48	
Pay roll . . . . .	5,699 61	
Dyke . . . . .	2,298 63	
Loam . . . . .	2,023 51	
Remodeling Magazine Building . . . . .	1,763 38	
Gravel for beach . . . . .	1,447 05	
Engineering . . . . .	1,392 14	
Teaming . . . . .	1,252 90	
Ashes . . . . .	328 50	
Supplies for locker-house . . . . .	130 47	
Boat, buoys, rafts and life lines . . . . .	107 57	
Removing old stone wharf . . . . .	100 00	
Moving voting booths . . . . .	60 00	
Stakes for engineers . . . . .	42 34	
Board walk . . . . .	39 79	
Shower bath and floor . . . . .	36 00	
Watering system . . . . .	26 41	
Signs . . . . .	25 49	
Printing and advertising . . . . .	19 43	
Lumber . . . . .	13 15	
Express . . . . .	5 85	
Carpentering . . . . .	3 58	
Black prints . . . . .	3 40	
<i>Amounts carried forward . . . . .</i>	\$28,640 68	\$57,201 18 \$133,020 51

<i>Amounts brought forward . . . . .</i>	\$28,640 68	\$57,201 18	\$133,020 5
Tools and hardware . . . . .	2 32		
Coal . . . . .	1 35		
Stove pipe . . . . .	90		
Repairing lock . . . . .	35		
		<u>\$28,645 60</u>	

*River Parkway, Section F.*

Engineering . . . . .	\$109 63
Loam . . . . .	79 56
Lighting . . . . .	64 68
Setting edgestone . . . . .	19 53
Pay roll . . . . .	18 88
Water rent . . . . .	6 00
Painting fence . . . . .	5 20
Gravel . . . . .	4 73
	<u>\$308 21</u>

*River Parkway, Section G.*

Lands . . . . .	\$4,907 99
Pay roll . . . . .	4,023 41
Lighting . . . . .	998 43
Teaming . . . . .	570 03
Engineering . . . . .	393 03
Loam . . . . .	199 02
Gravel . . . . .	193 73
Edgestone and setting . . . . .	57 14
Braces for willows . . . . .	37 29
Shrubs . . . . .	35 94
Examination of titles . . . . .	15 00
Black prints . . . . .	14 62
Lumber . . . . .	13 87
Recording documents . . . . .	10 75
Printing and advertising . . . . .	4 75
Bound posts . . . . .	3 00
Express . . . . .	2 74
Hose for trees . . . . .	1 50
Oil . . . . .	1 47
	<u>\$11,483 71</u>

*Nursery.*

Pay roll . . . . .	\$761 24
Trees . . . . .	125 75
Shrubs . . . . .	14 65
Tools and hardware . . . . .	5 36
Coal . . . . .	4 50
Labels . . . . .	1 50
Express . . . . .	30
	<u>\$913 30</u>

*Washington Elm.*

Curbing . . . . .	\$252 01
Pay roll . . . . .	110 60
Teaming . . . . .	31 50
Loam . . . . .	27 00
Engineering . . . . .	16 88
Cement . . . . .	1 99
	<u>\$439 98</u>

*Amounts carried forward . . . . .*

\$98,991 98 \$133,020 5

Amounts brought forward . . . . .	\$98,991 98	\$133,020 51
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*Last Cambridge Embankment.*

Filling . . . . .	\$221 10
Engineering . . . . .	103 88
Pay roll . . . . .	99 00
Lumber . . . . .	1 14
Hardware . . . . .	25
	<hr/>
	\$425 37

*Ridge Field.*

Gravel . . . . .	\$46 80
Pay roll . . . . .	34 67
Signs . . . . .	25 00
Engineering . . . . .	23 62
Repairing drinking faucet . . . . .	3 30
Teaming . . . . .	2 25
	<hr/>
	\$135 64

*Cambridge Field.*

Ice plane . . . . .	\$128 25
	<hr/>
	\$128 25

*General Account.*

General Superintendent's salary . . . . .	\$1,675 00
Landscape Architect's fees . . . . .	630 20
Watering cart . . . . .	350 00
Board of horse, carriage hire, etc. . . . .	326 75
Tools and hardware . . . . .	169 45
Printing and binding reports of 1898 . . . . .	169 22
Car tickets for engineers . . . . .	150 00
Pay roll . . . . .	122 33
Heliotype cuts for reports of 1898 . . . . .	102 50
Rent of store room . . . . .	100 00
Bicycle and bicycle repairs . . . . .	64 70
Stakes for Engineers . . . . .	62 34
Sign boards for "Rules and Regulations" . . . . .	55 00
Carpentering . . . . .	51 31
Car tickets for office . . . . .	50 00
Lawn sprinklers . . . . .	39 00
Blacksmithing . . . . .	29 68
Badges, etc., for police . . . . .	27 90
Shoeing horse . . . . .	27 00
Rubber boots . . . . .	25 50
Binding books . . . . .	22 00
Rods for Engineers . . . . .	15 50
Printing . . . . .	12 25
Engineering . . . . .	12 23
Repairing wagon . . . . .	10 50
Photographic material . . . . .	10 18
Sharpening tools . . . . .	7 80
Express . . . . .	7 55
Killweed . . . . .	4 50
Envelopes for reports . . . . .	4 15
Repairing Engineer's transit . . . . .	3 60
Cigars . . . . .	3 25

Amounts carried forward . . . . .	\$4,341 39	\$99,681 24	\$133,020 51
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## CITY OF CAMBRIDGE.

<i>Amounts brought forward . . . . .</i>	\$4,341 39	\$99,681 24	\$133,020 51
Repairing harness . . . . .	2 95		
Recording documents . . . . .	1 10		
Inking pads . . . . .	75		
Lumber for raft . . . . .	25		
		<u>\$4,346 44</u>	

*Office Expenses.*

Salary of stenographer . . . . .	\$650 00		
Salary of bookkeeper . . . . .	390 00		
Stationery and printing . . . . .	137 01		
Telephone service . . . . .	126 25		
" Pay roll " and " Assessed Values " books . . . . .	47 00		
Oak plan cabinet . . . . .	46 50		
Typewriter supplies . . . . .	7 75		
Repairing desk . . . . .	5 87		
Express . . . . .	75		
		<u>\$1,411 13</u>	
Total . . . . .		\$105,438 81	
Balance unexpended . . . . .		<u>\$27,581 70</u>	

## PARK MAINTENANCE.

Amount appropriated March 16, 1899 . . . . .	\$13,500 00
Amount appropriated November 2, 1899 . . . . .	998 60
	<u>\$14,498 60</u>

## EXPENDED.

*Shade Trees.*

Pay roll . . . . .	\$3,887 79
Wire netting . . . . .	317 92
Teaming . . . . .	237 26
Tools and hardware . . . . .	63 23
Engineering . . . . .	44 11
Tree poles . . . . .	30 00
Lumber . . . . .	10 58
Sharpening saws . . . . .	9 20
Hose for trees . . . . .	5 25
Repairing fence . . . . .	4 30
Trees . . . . .	3 00
Repairing measuring stick . . . . .	2 60
Loam . . . . .	1 80
Printing and advertising . . . . .	1 29
Express . . . . .	1 00
Cheese cloth . . . . .	25
	<u>\$4,619 58</u>

*Cambridge Field.*

Pay roll . . . . .	\$2,757 89
Fence stakes . . . . .	74 25
Tools and hardware . . . . .	46 56
Canvas and repairing awning . . . . .	35 61
Base ball bases . . . . .	28 00
Repairing drinking fountain . . . . .	27 72
Sand for courts . . . . .	26 24
Uniform . . . . .	24 50
<i>Amounts carried forward . . . . .</i>	<u>\$3,020 77</u>
	<u>\$4,619 58</u>
	<u>\$14,498 60</u>

## PARK DEPARTMENT.

33

*Amounts brought forward . . . . .* \$3,020 77 \$4,619 58 \$14,498 60

Teaming . . . . .	23 25
Repairing fire hose . . . . .	13 25
Flags . . . . .	11 60
Repairing leak in water pipe . . . . .	10 37
Engineering . . . . .	6 00
Express . . . . .	2 00
Hose for trees . . . . .	1 62
Sewer grating . . . . .	1 50

————— \$3,090 36

*Commons and Squares.*

Pay roll . . . . .	\$2,339 96
Lumber . . . . .	127 30
Teaming . . . . .	103 50
Work on flagstaffs . . . . .	41 99
Gravel . . . . .	39 00
Flags . . . . .	34 80
Tools and hardware . . . . .	29 42
Rubbish barrels . . . . .	21 00
Engineering . . . . .	15 86
Repairing flags . . . . .	9 50
Repairing hydrants . . . . .	9 44
Signs . . . . .	2 96
Bulbs . . . . .	1 50
Express . . . . .	16

————— \$2,776 39

*The Shelter.*

Pay roll . . . . .	\$2,095 25
Telephone service . . . . .	108 54
Coal . . . . .	96 75
Lighting . . . . .	50 12
Plumbing . . . . .	43 80
Wire mats . . . . .	42 00
Uniforms . . . . .	37 75
Clock . . . . .	35 00
Miscellaneous repairs and supplies . . . . .	32 10
Laundry . . . . .	24 09
Floor brushes . . . . .	19 50
Toilet paper . . . . .	18 00
Towels . . . . .	9 75
Hanging awnings . . . . .	2 15
Express . . . . .	85

————— \$2,615 65

*Public Grounds.*

Pay roll . . . . .	\$695 73
Plants . . . . .	65 00
Manure . . . . .	55 36
Bulbs . . . . .	53 60
Engineering . . . . .	32 74
Loam . . . . .	27 00
Sod . . . . .	20 40
Garden hose and line . . . . .	6 75

————— \$956 58

*Amounts carried forward . . . . .* \$14,058 56 \$14,498 60

## CITY OF CAMBRIDGE.

<i>Amounts brought forward . . . . .</i>	\$14,058 56	\$14,498 60
<i>General Account.</i>		
Board of horse . . . . .	\$260 00	
Repairing wagon . . . . .	50 00	
Repairing lawn mowers . . . . .	48 00	
Repairing harness, etc. . . . .	20 25	
Tools and hardware . . . . .	19 45	
Shoeing horse . . . . .	16 50	
Repairing bicycle . . . . .	11 65	
Lawn mower sharpeners . . . . .	10 00	
Express . . . . .	2 60	
		<u>\$438 45</u>
Total . . . . .		\$14,497 01
Balance unexpended . . . . .		<u><u>\$1 59</u></u>

Respectfully submitted,

H. E. WHITING,

*General Superintendent of Parks.*

## REPORT OF THE LANDSCAPE ARCHITECTS

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BROOKLINE, MASS., December 8, 1899.

*George Howland Cox, Esq., Chairman of the Board of Park Commissioners,  
Cambridge, Mass.:—*

DEAR SIR:—We beg to submit herewith a report upon certain matters connected with the Cambridge Parks which have engaged our attention during the year. Of the various problems upon which the Board has asked our advice and for which we have prepared plans or conferred with the General Superintendent we will refer briefly to the following:—

### STREET TREES.

During the past summer it was generally noticed throughout the whole Metropolitan District of Boston that certain unusual conditions of climate or the ravages of some disease had caused the decline and death of a great number of trees. Young trees and old, even in the wildest districts of the reservations, were stricken as well as those in the hearts of towns and cities. Within the limits of Cambridge many elms and maples failed and the usual mortality among the street trees was greatly increased over previous years. The examinations which we made lead us to believe that while unfavorable conditions of light, air, moisture, and soil might be blamed for the death of many of the trees in the streets of Cambridge, there were evidences that other agencies had been more active in their demise. We discovered the presence of insect pests and fungus growths, but these were insufficient to produce the effects noted, and they appeared rather to thrive through weaknesses already sapping the vitality of the trees than to have brought about the decline themselves. We were inclined to attribute the unusual death rate to protracted hot and dry weather immediately preceded by periods of unusual moisture during a season following a severe winter. We stated our theories of the causes and effects with some hesitation, however, because our field and methods of observation were limited.

### LATIN SCHOOL.

We prepared plans for the approaches to the new Latin School building during the season, and we arranged these approaches with various plantations to relate to the approaches and plantations of the

adjoining buildings,—the High School, the Public Library and the Manual Training School,—to the end that the whole group should constitute one whole. The location of a flagstaff upon the Public Library grounds promised further to enhance the effect of unity between the buildings. In consideration of the absence of squares or playgrounds in the neighborhood of the school buildings, we advised that the whole area between the Latin School and the English High School be retained as a large school yard, and we further advised that the narrow piece of unused land just north of the Latin School and adjacent to a vacant lot be levelled and a running track for short dashes be laid out upon it. Our plans provided for plantations of shrubbery and flowers on either side of the straight-away, in the hope that at recess time this part of the grounds would constitute an especially attractive part of the complete path circuit of the Latin and English High School buildings. After school hours gates at the ends of the straight-away would isolate it for athletic purposes and prevent its use as a short cut between Trowbridge and Ellery Streets.

Plans for the various playgrounds and squares throughout the City have already been prepared, and we have only to note the successful progress of work and the healthy growth of plantations as well as the increasing usefulness of these areas.

#### CHARLES RIVER.

The greatest work which your Board has undertaken — the improvement of Charles River within the boundaries of the City of Cambridge — has shown marked advance toward completion during the past year. These improvements have not only gained for Cambridge a unique park landscape and solved a sanitary problem of great difficulty, but they have established a precedent for the preservation and utilization of the river banks as a public treasure which will go far to ensure them similar appreciation at the hands of municipalities who are fortunate enough to include other portions of the river course within their own boundaries. In our previous reports we have discussed at some length designs for the treatment of the banks as a whole, and we have entered into the details of takings, alternative courses, removal of private interests, shore protection, the handling of floods, the utilization of low land, the installation of walks, drives, shelters and plantations. We have also discussed the need of certain bridges and we have advocated a dam to hold the river at an even elevation. At the present time, therefore, we shall limit ourselves to a consideration of certain parts of the river banks which possess landscape features of such character as to lend themselves to special uses and treatments. Of these parts of the river shore we will refer to the following which have been the scene of particular activity during the past year.

## THE ESPLANADE.

The main body of the Esplanade has been graded and planted, and the drives surfaced. The formal rows of trees are thriving. The ornamental plantations of shrubbery which were originally designed to be set out at some future time when it should appear desirable to provide walks and curbings, have been set out already. The plantations are so disposed that the walks can be accommodated to them in the future. The presence of the plantations appeared desirable to enliven the ribbon of green sward at this time, when it has no architectural support of any kind except the drives. The plantations, which are geometrical in plan and strictly formal, are made up of plants of close and rather low habit, although occasional specimens of higher growth appear at salient points for accent. Varieties of flowering plants, which can be depended upon to withstand the winds of an exposed situation as well as smoke and salt air, were especially sought for the plantations.

At present, entrance to the Esplanade is to be gained at its right angle intersection with Massachusetts Avenue at the northern end of Harvard Bridge, and at Main Street, near West Boston Bridge. The esplanade remains to be connected at its western extremity with Brookline Street, or neighboring streets. These connections are of great importance, because it is through them that travel over the esplanade, both by foot and wheel, is to find its easiest and most attractive circulation. Upon the precise form of the connections will depend facility of entrance and exit, as well as landscape and architectural excellence, in the terminations of the Esplanade.

Upon the east the Esplanade meets Main Street diagonally at a point nearly opposite First Street after a long straight run of over a mile. The diagonal junction makes a formal termination of the vista and of the lines of the drive and promenades necessary if the Esplanade is to end in a dignified and effective manner. We propose to accomplish this formal termination by a circle of the width of the central grass plot occupied by a monumental shaft and backed by a dense plantation of trees and shrubbery. Access to the circle from Main Street will be had first, by means of a short length of curving road through the midst of the plantation, and second, by a short section of straight drive placed at right angles with the Esplanade and centered upon the circle. The first means of communication will serve the needs of travel to and from Boston, while the second means will afford a convenient course for travel toward the "East Cambridge Embankment" and to and from Cambridge and Cambridgeport. The second line of communication is especially needed to overcome the sharp angle of junction between the Esplanade and Main Street.

The problem of the termination of the western extremity of the Esplanade is a complicated one. The question of the Charlesmouth Bridge, the extension of various streets, the provision for convenient traffic communication, the overhead crossing of the branch tracks of the Boston & Albany Railroad, and many other matters, including among them questions of financial policy, are involved in it. We have presented several schemes to your Board for handling the problem, which we regarded as purely tentative, but of value as proving that the Esplanade can be safely carried at its full width as far as Erie Street without danger of conflict with future constructions. In its most general terms the treatment which we suggest for the present western termination of the Esplanade and for its connection by a link of drive with the Brookline Street district is as follows: The long central planting strip which occupies the centre of the Esplanade, and which extends for over a mile in a westerly direction from Main Street across Massachusetts Avenue toward Cottage Farm, should terminate for the present at Erie Street. At that point a circle and a shaft might be made to serve as a definite point of change in the course of the Esplanade, as has already been suggested for the eastern termination. The sea wall should end, temporarily, at a wooden bulkhead extending shoreward and at right angles with the masonry front. Beyond the bulkhead a beach shore should await the future continuation of the stone sea wall. Within the compartment formed opposite the end of Erie Street by the angular termination of the vertical shore protection and accented by the circular grass plot and its accessories, the southern drive of the Esplanade would find an end. The northern drive and the promenade, however, would continue to follow the river shore to Brookline Street, upon such lines that any one of the various schemes outlined for the future continuation of the southern drive, the completion of the sea wall, the extension of side streets, and the provision of a bridge opposite Ashby Street, can be made to bear an organic relation to it. During the period of years elapsing between the completion of the temporary termination and the partial extension, which we have outlined above, and the completion of the final plan, which is to solve the problem of bridges, traffic roads, road extensions and other matters, we believe that the temporary partial extension will amply provide for the needs of a parkway connection and present an aspect in keeping with the scenery of the improved parts of the river and the demands of a residential district. We also believe that the temporary form of termination of the Esplanade cannot fail to present a workmanlike aspect and to satisfy the need of vigorous architectural treatment in the line of drive at a point where it undergoes a change in direction, if not a change in arrangement.

## CAPTAIN'S ISLAND.

During the past year your Board called upon us to study the extension of Granite Street and we reported with two plans. The first plan showed Granite Street extended upon its original lines to Brookline Street at the sacrifice of parts of several lots and the taking of one house and a part of an adjoining barn. The second plan showed an abandonment of the present line of Granite Street and a new location in a parallel position nearer the river. The second plan escaped all existing buildings and required smaller takings. Both plans called for the occupation of a part of the old rangeway.

During the past summer the ruin of the old Magazine, which has stood for years upon the border of the river, has been made a temporary shelter for dressing-rooms for bathers. Eventually it is to serve as an Administration Building for the playground and its accompanying field and bath houses. It is the intention of the plan which has been prepared for this district to provide bath houses for men and women on either side of the old Magazine. These buildings can be used as shelters in the winter season when the field is flooded for skating. The buildings are arranged to relate directly to separate playgrounds which occupy portions of the dyked area. The playground for men is in a suitable condition for base ball games and other athletic sports, but the playground for women and girls will require further filling to raise it to the required elevation. The Administration Building has utilized what little masonry the old Magazine could offer for walls and the addition of a roof, windows and various interior improvements has transformed it into a structure convenient for present uses.

A drive is contemplated upon the plan which is in effect a continuation of Magazine Street, and which approaches near enough to the water's edge to allow persons to view the shore and the bathers from carriages. The beach is over a quarter of a mile in extent, and a foot-walk is to be carried along its crest to connect with the various buildings. Upon the playground areas it has been possible to improve the natural condition of the ground by draining and by a surfacing of gravel placed upon the marsh-grass surface. The addition of loam to those parts of the Island which are too sterile to support vegetation will allow the maintenance of plantations of shade trees and shrubbery. As an indication of the popularity of this beach during the past summer, it is estimated that no less than twenty-five thousand persons have taken advantage of it, although neither of the secondary buildings have been erected as yet. The men and boys were accommodated at the Administration Building, but in the absence of other shelter the women and girls were dependent upon temporary buildings arranged for them.

The opportunities which the river affords for bathing and boating will always give a distinctive character to the Captain's Island playground and insure it a wide popularity. At present the centre of population is much further removed from it than from Cambridge Field or Rindge Field, but the attraction which water sports offer has already overcome the obstacle of distance, if the records of the last summer's patronage are evidence. Just what demand will be made upon the playground when the district about it is more thickly settled, is a matter which the future will prove and for which it must provide.

#### EAST CAMBRIDGE EMBANKMENT.

The plan which was prepared for the East Cambridge Embankment several years ago has lately been revised, in order to provide a bathing-beach somewhat as we originally advised. This involves the removal of a small portion of the existing sea-wall. The beach is to be four hundred and fifty feet in length. Although a greater amount of filling is in place at the southwesterly end of the embankment than at the opposite end, it seems advisable to place the beach at the southwesterly extremity. In that position the adjoining river-bottom at low tide will offer a less dangerous slope to bathers, and the beach will be further removed from a canal of comparatively foul water, which finds outlet near the north-easterly end. Moreover, the adjoining filled areas will give better support to the wing of planting and the walk which borders one end of the beach, if the beach is placed at the southwesterly end rather than at the opposite extremity of the embankment, where no filling has as yet been done. The plan shows a field-house placed midway between the playground proper and the beach. This field-house will provide accommodation for bathers as well as for persons engaged in field sports. A concert grove is arranged formally opposite the field-house, with a system of walks radiating from a band-stand to all parts of the grounds. The East Cambridge Embankment will therefore become a pleasant place of resort in the day-time on account of the facilities offered for bathing, playground exercise, and the shade of the groves and walks. During the evening hosts of persons, who are confined within doors during the day, will seek it as a place for rest and exercise, especially when music is provided.

#### CAMBRIDGE HOSPITAL SECTION.

The last plan made by us during the past year for your Board was prepared in connection with the treatment of that section of the banks of Charles River lying between the termination of the present constructions on Mount Auburn Street, near the Cambridge Hospital, and the holdings

of the Metropolitan Park Commission upon the southwest. The proposed taking lines are continuations of an important line in the constructed section which represents the side line of a roadway to be put through at some future time. Certain grading has already been carried out in the constructed section in preparation for the passage of this carriage-way. The plan prepares for the passage of this road not only in the taking line but also in the positions indicated for the planting of trees which are eventually to border the new thoroughfare. The cross-section which we advise for the new portions, and which provides for the tree plantations mentioned above, is similar in intention to the cross sections already accepted for the adjacent constructed portions. The proposed sections provide for a promenade twenty feet in width, in continuation of the present promenade, with a planting space upon the landward side toward the taking line also twenty feet in width. The grading is arranged upon contours that will require a minimum amount of additional work to be done when the driveway is carried through. Two styles of shore treatment can be applied to the shores bordering the arrangement described above. The first style of treatment calls for a gravel beach upon a slope not greater than one in five. The second style of treatment calls for a much steeper beach—one so steep that paving will be needed to protect it against the attacks of water and ice. This treatment will produce a shore of an evidently artificial character but it possesses the practical advantage that it will not intrude upon the limits of the present pier and bulkhead line as does the construction involved by the first style of treatment. We have made many studies in an attempt to reconcile the arrangement of planting spaces and the promenade with a beach of gentle inclination, and at the same time avoid trespassing upon the present pier and bulkhead line, but the available space is so constricted that we have found it impossible to produce a cross section which accomplished such a purpose without cramping the promenade and the planting spaces seriously and eliminating the shade trees altogether. As this sort of treatment would produce a river border radically different from the constructed portions adjacent to it, as well as one meagre and uninteresting in appearance, we abandoned it and returned to the cross sections first described. We were led to believe that the advantages gained by the beach of gentle inclination over the steep paved beach were sufficient to warrant a plea for a change in the pier and bulkhead line. An appeal was, therefore, made to the Harbor Commissioners to move the pier and bulkhead line, upon the ground that among other advantages the river course would be straightened thereby if the pier and bulkhead line upon the opposite shore were moved correspondingly southward to retain the present channel accommodations.

## CITY OF CAMRRIDGE.

The Harbor Commissioners agreed to the change and the Metropolitan Park Commissioners allowed it as affecting their holdings upon the opposite bank. The matter now rests with the authorities at Washington for final settlement. We have suggested, as a fitting continuation of the promenade at its point of junction with the present holdings of the Metropolitan Park Commission on the Cambridge side of the river, that that Commission be requested to construct a walk past the supposed site of the house of Leif Erickson, and thence through a charming valley, near at hand, to Elmwood, the homestead of James Russell Lowell.

Respectfully submitted,

OLMSTED BROTHERS.

## REPORT OF THE CITY ENGINEER

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OFFICE OF CITY ENGINEER, CITY HALL,  
CAMBRIDGE, December 1, 1899.

*Geo. Howland Cox, Esq., Chairman Cambridge Park Commission:*

DEAR SIR:—The engineering work performed in connection with the Park Department during the past year has been largely in completing contracts already made, and in setting out the work of improving the various sections which were to be finished by grading, loaming, planting, etc.

The important work of filling the Esplanade and adjacent private flats near Main Street was completed by the contractors about April 1, 1899.

The final estimates of this work and its cost are as follows:—

Main Street (narrow strip) . . . .	1,319 sq. ft. filled	\$131 90
City Wharf lot . . . .	37,282 " " "	3,728 20
F. H. Rindge lot . . . .	10,635 " " "	1,063 50
B. F. Brown lot . . . .	33,090 " " "	3,309 00
Esplanade (not including area occupied by wall and ballasting)	426,300 sq. ft. filled	49,881 75
		\$58,114 35

Of the above amounts it has been agreed that one half the cost of filling the "Brown" lot shall be paid by the owner.

The Esplanade has been substantially completed in grading and surfacing from the portions treated in 1898 and extending easterly for about 730 feet. Considerable work has also been done in finishing the Esplanade as extended westerly for a distance of about 920 feet. In connection with this grading of the Esplanade, 36 catch basins have been built to take off the surface water, and 1,600 feet of drain pipe for outlets to these catch basins have been laid.

A single roadway on the northerly side of the Esplanade has been graded and opened for travel from a point near Main Street at West Boston Bridge to the end of the completed section, a distance of about 2,540 feet. There has been a total length of roadway completed at the Esplanade of 7,720 feet, and about 7,900 feet of walks. In this connection also 364 shade trees have been set out.

The dyke, mentioned in my last report as partially completed, was finished by contractors Nawn and Brock, on May 13, 1899. A change was made in the location of the dyke at its easterly end to allow for the proposed location of a bath house near Brookline Street, so that some delay and increased cost was occasioned. The total cost of the dyke 1,151.6 feet long, including drainage ditch, sheet piling, and extra work, was \$2,298.63.

The park roadway between Magazine Street and Brookline Street, about 1,200 feet long, partly filled at various times before, has been constructed and graded substantially to a width of 80 feet. Nineteen thousand eight hundred and twenty-one cubic yards of material were furnished by Mr. William B. Mullen for this work, at a cost of \$11,496.18.

In all these fillings great difficulty has been experienced in keeping the surfaces to grade, owing to the constant tending to settlement. The marsh mud being in most cases deep and soft, when loaded even with a small amount of filling a settlement of the surface is at once noted. When loaded with ten feet of filling a settlement of as great as three and five-tenths feet has been observed. Of course, under these conditions, it is impossible to keep the surfaces of the filled tracts at the proper grade for any length of time.

At Captain's Island, where the old State Magazine has been made into a bath house and a bathing beach constructed, 3,022 cubic yards of gravel, dredged from the river, were used in making the beach, at a cost of \$1,447.05.

Plans were made for enclosing the Washington Elm with a substantial granite curb. This was done, and the enclosed area dug up and filled with loam and seeded.

Various plans and estimates of a miscellaneous character have also been prepared for contemplated work; plans showing the proposed filling between the end of the seawall at the Esplanade and Brookline Street; plans showing proposed filling and change in seawall line between Brookline Street and River Street; also plans for proposed change in the line of Charles River between Boylston Street and the Cambridge Cemetery. Copies of these last two plans were also filed with the War Department at Washington, D. C. Plans and descriptions have also been prepared for the taking of a strip of land to be used for park purposes on the river bank, across land of the Cambridge Hospital.

Sundry plans have also been made for grading yards at the Latin and English High and the Peabody Schools.

Four assistants have been employed on park work during the season, two during the entire year.

Very truly,

L. M. HASTINGS, *City Engineer.*

4972-9







